

The **aim** of this work is to determine the relevance of extemporaneous dental gel development for the treatment of gingivitis based on Calendula tincture.

Materials and Methods. As the objects of research were used: modern assortment of dental gels of industrial and pharmaceutical production for the treatment of gingivitis, Calendula tincture.

Results and Discussion. To date, for the local treatment of gingivitis used such dental gels, such as Metrogil Dent, Asepta, Holisal, Solcoseryl and Kamistad. As for the modern range of extemporaneous dental gels, today it is almost absent. That is why it is important to create an extemporaneous gel for the treatment of gingivitis. In this case, the use of natural raw materials, such as Calendula tincture, should be considered as the active substance. Calendula officinalis is one of the well-known medicinal plants that are widely known throughout the world and in Ukraine. Due to the accumulation of a large variety of classes of biologically active substances, Calendula worldwide is recognized as a medicinal plant and included in the official pharmacopoeia, as a source of obtaining a number of drugs. For example, Calendula tincture – alcohol (70 % alcohol, 1:10) extract from flowers and flower baskets, which is used for cuts, purulent wounds, for rinsing the throat. In our view, the use of Calendula tincture in the dosage form of extemporaneous dental gel can be an effective therapeutic agent for use in the treatment of gingivitis.

Conclusions. The development of extemporaneous dental gel for the treatment of gingivitis on the basis of Calendula tincture in connection with the almost complete absence of an assortment of similar extemporaneous dosage forms on the pharmaceutical market has been proved.

THE IMPROVEMENT OF EXTEMPORANEOUS SUPPOSITORY TECHNOLOGY FOR THE TREATMENT OF HEMORRHOIDS

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Introduction. Hemorrhoids is the most common proctological disease affecting an average of 12 people out of 100. Hemorrhoids affects more than 10 % of the adult population of the planet, and the proportion of the total number of proctological diseases is 40 %. Hemorrhoid is the most common reason to see a proctologist. Therefore, the problem of choosing the tactics of treatment of this category of patients remains relevant. If constipation is called “intellectual disease”, then hemorrhoid is called “royal disease”. Men and women suffer from this disease equally. In women, exacerbation of hemorrhoid often occurs during pregnancy, usually in the last trimester. Sooner or later, enlargement of the hemorrhoid appears in most people.

The **aim** of this work is the improvement of extemporaneous suppositories technology for the treatment of hemorrhoids.

Materials and Methods. As the objects of research were used extemporaneous rectal suppositories with Belladonna extract, zinc sulphate and xeroform on different suppository bases.

Results and Discussion. Extemporaneous prescriptions for the treatment of hemorrhoids have often been shown to be synthetic hydrophobic-based suppositories. But in extemporaneous compounding often use a base – cocoa butter – of natural origin, which does not have disadvantages when applied. Cocoa butter belongs to natural hydrophobic bases and for many years is considered the best base of natural origin. Cocoa butter has several advantages: it is well mixed with various medicinal substances, quickly releases the injected medicinal substances, has a clear melting point and high plasticity, and has a pronounced reparative and lubricating effect. The preparation of the suppositories was performed by the method of pouring out, taking into account the requirements of the State Pharmacopoeia of Ukraine 2.0 and the Instruction of the Ministry of Health of Ukraine “Requirements for the manufacture of non-sterile medicines in the conditions of pharmacies”. To determine the technological parameters of model drug

samples, their description (homogeneity), melting point, and resistance to destruction were studied. Prepared samples of suppositories according to the developed technology fully meet the requirements of State Pharmacopoeia of Ukraine to this dosage form.

Conclusions. Extemporaneous suppository technology for the treatment of hemorrhoids is improved.

SUBSTANTIATION OF GEL COMPOSITION WITH POPLAR EXTRACT AND DEXPANTHENOL FOR BURN WOUNDS TREATMENT

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Introduction. Development of drugs with active pharmaceutical ingredients (API) which are herbal substances is a promising area of modern pharmacy. The advantages of herbal remedies are their effectiveness and low toxicity, which allows for application during long time, for the prevention and treatment of many diseases with low risk of side effects. Therefore, herbal remedies are in high demand in the Ukrainian and global pharmaceutical markets, but their nomenclature and supply are lower of the growing demand.

Aim. The purpose of the work was to substantiate the gel composition containing as API poplar extract and dexpanthenol for burns treatment.

Materials and methods. Database of scientific articles and Internet resources were used for search materials. During the work, the following research methods were used: search, analytical, synthetic and descriptive. For the gel composition development, the properties of the following API were studied: Poplar leaf extract and dexpanthenol.

Results and discussion. A promising source of API for the gels for burn wounds treatment obtaining are representatives of the Salicaceae family, including the genus *Populus*. The buds and leaves of Poplar containing a large range of biologically active substances: flavonoids, phenologlycosides, simple phenols, essential oils, tannins, organic acids, vitamins, terpenoids and more. Extract the of Chinese poplar leaves has high antimicrobial activity against gram-positive microorganisms among other Poplars. It has a pronounced anti-inflammatory, wound healing, antibacterial, detoxifying properties. These clinical effects cause a complex effect on pathogenic mechanisms that cause infectious wound inflammation. Gels were widely used in clinical practice for the wounds treatment, and Carbopol the most prevalent gel former.

In order to speed up the healing of burns, Dexpanthenol was introduced into the gel composition. Dexpanthenol readily penetrates into the skin and mucous membranes, where it is quickly oxidized to pantothenic acid. It is also used in the biosynthesis of coenzyme A, which plays a role in a wide range of enzymatic reactions and thus in cell growth. Analysis of the literature data and previous investigations confirms its high regenerative and reparative effects.

Conclusions. Thus, according to the literature data and previous studies, Poplar leaf extract and dexpanthenol can be used for further studies in the creation of semisolid medicinal form for the burns treatment.